

FIG. 1A

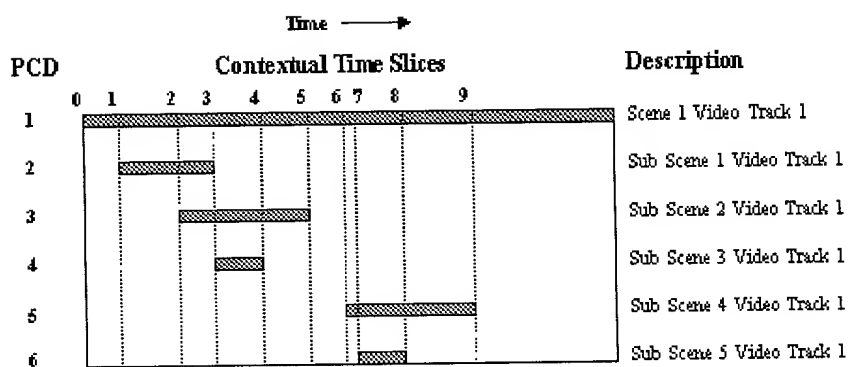


FIG. 1B

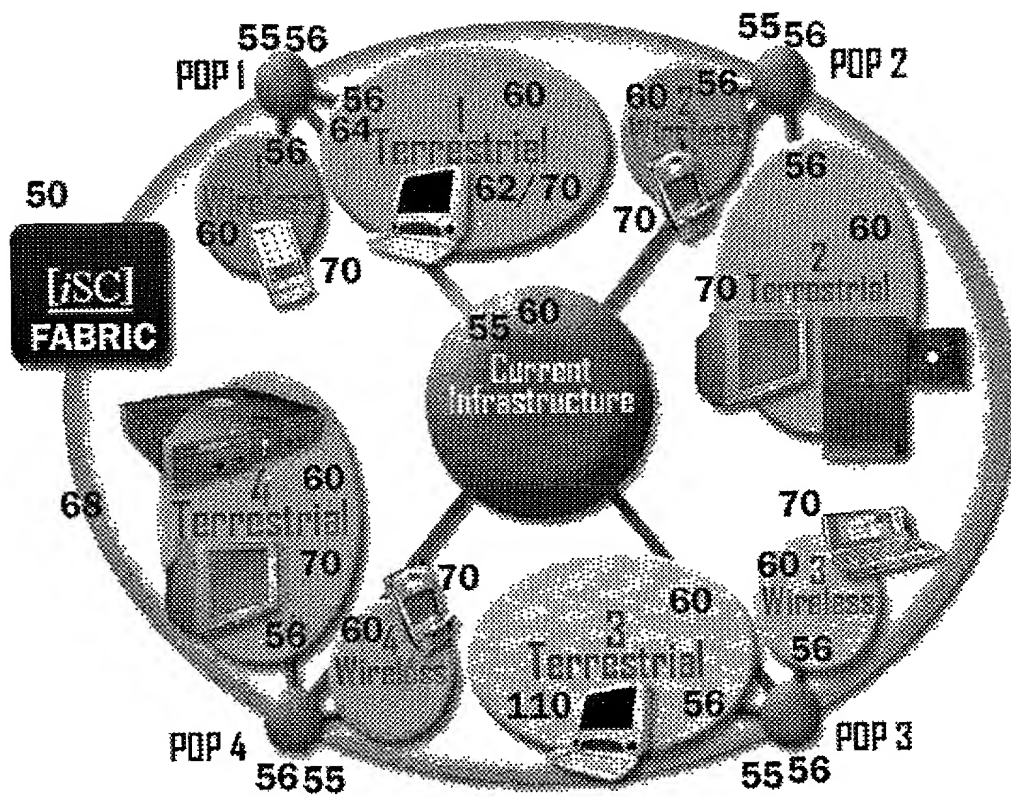


FIG. 2

Server initializes a content database and a context database (step 300)
server receives and parses requests being directed at it (step 302)
If the request is from a compatible authoring system, the server adds or updates the received information to its content database (step 304)
If the request is not from the authoring system, the local server 62 determines whether it is from a user (step 306). If so, the system determines whether the user is a registered user or a new user and provides the requested content to registered users (step 308)
Periodically update the context database by correlating the user's usage patterns with additional external data to determine whether the user may be interested in unseen, but contextually similar information (step 310).

FIG. 3

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import content elements (step 352)
apply contextual descriptors to elementary streams (step 354)
define compositional layout (step 356)
content is arranged in regards to layout, sequence, and navigational flow (step 358)
define and associates context menus to contextual descriptors; specify hierarchical positioning of context menu entry, description, and one or more of the following end actions (local-offline, remote, and transitional (if remote is defined)) (step 360)
specify design-time rules for flow customization(step 362)
specify image destination (CD, DVD, streamed, for example) (step 364)
specify licensing requirements (copy protection, access control, and e-commerce), which may vary for specific content segments (step 366)
register as a content provider if user is not one already (step 368)
generate final, registered output image; registration entails updating system databases in regards to content, context, and licensing requirements (step 370).

FIG. 4

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user first logs-in to the server (step 401)
server retrieves the user characteristics and presents a list of options that are customized to the user's tastes (step 402)
user can select one of the presented options, can designate an item not on the list, or can insert a new DVD (step 404)
user selection is updated in the context database (step 406)
local server retrieves information from the content to be played (step 408)
local server customizes the content and/or associated programs such as associated advertisements or information for the content (step 410)
stream content to the terminal (step 412)
user can view the content or can interact with the content (step 414)
each user operation is captured, along with the context of the operation, and the resulting data is used to update the context database for that user (step 414)
local server can adjust the content based on the new interaction (step 416) before looping back to step 410 to continue showing the requested content

FIG. 5

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user initiates playback of content (step 452)
browser/player then demultiplexes any multiplexed streams (step 454)
parses BiFS elementary stream (step 456)
user fulfills licensing requirements to gain access if content is protected (step 458)
browser/player invokes appropriate decoders (step 460)
begins playback of content (step 462)
send contextual feedback to system (step 464)
system updates user preferences and feedback into the database (step 466)
sends new context information as available (step 468)
check for remote content acquisition process (step 470)
handle requests for remote content (step 472)
user responds to any interactive selections that halt playback, such as with menu
screens that lack a timeout and default action (step 474)
If live streams are paused, the system performs time-shifting if possible (step 476)
user may activate context menu at anytime, and make an available selection (step 478)

FIG. 6

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user may opt to participate in public viewing session, or opt out of such a session; this is useful for point-to-point presentations, for example (step 502)
When opting for a public viewing session, other public users become visible, and may join into groups, resulting in synchronized sessions with one user designated as the pilot for navigation purposes (step 504)
When part of a group, a communication window is made available so users may discuss the content (step 506)
When part of a group and not the pilot, all content viewed is logged in passive mode, as the user is not responsible for interactive selections (step 508)
Pilot can enter a white board mode, and draw on the presentation content; these drawings are made visible to the other group members (step 510)
user can work in annotation mode, which is analogous to third party value-add information, in that users may leave commentary tied to particular sequences of the presentation, the visibility of such annotations may be public, or visible only to restricted access groups; an annotation window is utilized for these purposes, and is tied to the content the user is currently viewing (step 512)
Upon having his or her annotations commented upon, the user may elect to receive email notifications (step 514)

FIG. 7